

Strain differences in deconjugation of bile acids in *Bifidobacterium pseudocatenulatum* isolates

ABSTRACT

The survival and growth rate of twenty eight isolates of bifidobacteria in bile were evaluated. Of 28 isolates, 25 were tolerance towards 2.0% concentration of bile while 14 isolates were tolerance towards 4.0% of bile after 12 hours of exposure. Six isolates of bifidobacteria with higher tolerance to 4.0% of bile were further evaluated for their ability to deconjugate different types of bile acids namely taurocholic acid (TC), glycocholic acid (GC), taurochenodeoxycholic acid (TCDC), glycochenodeoxycholic acid (GCDC), taurodeoxycholic acid (TDC), and glycodeoxycholic acid (GDC). Three *Bifidobacterium pseudocatenulatum* isolates (D22, F117, and G4) were found to have the similar deconjugation activity and were able to deconjugate 78.6-84.6% (TC), 98.9-99.9% (GC), 87.9-97.5% (TCDC), 91.1-100.0% (GCDC), 83.7-87.8% (TDC) and 96.5-99.0% (GDC).

Keyword: *Bifidobacterium* spp., Probiotic; Deconjugation; Bile salt hydrolase